REMARKS/ARGUMENTS

This amendment responds to the office action dated April 17, 2006.

The applicant has amended independent claims 1, 5, and 12 for clarity.

The Examiner rejected claims 1-18, 20 and 22 under 35 U.S.C. § 102(b) as being anticipated by Kakutani, U.S. Patent No. 5,553,166. Kakutani discloses a digital halftoning method where a continuous (i.e. multigradation image) may be reproduced on a binary tone output device. Specifically, Kakutani discloses that the output device deposits a dot at a location corresponding to a pixel in the digital image if a modified intensity of the pixel exceeds an intensity threshold that varies according to the formula slsh = (data(i,j)*(K-1) +128)/2 where slsh is the applicable intensity threshold, data(i,j) is the intensity of the pixel in the digital image, and K is a constant. If the threshold is not exceeded, no dot is deposited. When determining whether the variable threshold has been exceeded, such that a dot is deposited, the image pixel intensity is modified by an accumulated error transferred from adjacent pixels.

An error is defined as the difference between the output intensity (either 0 or 255 for a binary device) and the intensity of the pixel of the continuous tone image. That error is distributed to adjacent pixels according to the formulas shown at col. 9 lines 9-24 of the cited reference. Though the respective errors accumulated from neighboring pixels is added to the intensity of each pixel of the source image when determining whether the applicable threshold has been exceeded (see col. 9 lines 32-40), accumulated errors are not taken into account when determining the value of the intensity threshold. In other words, the variable intensity threshold of Kakutani is not a function of an accumulated error for any image pixel. It is for this reason that each of the presented claims patentably distinguishes over the cited reference, and the Examiner's rejection is therefore in error.

Independent claim 1 includes the limitation of "selecting a first intensity threshold if a said accumulated error of a selected one of a current pixel and a neighboring pixel exceeds a first error threshold." This limitation is not disclosed by Katakuni, which instead discloses an intensity threshold being selected purely on the basis of the intensity of the source pixel. *See* col. 8 line 32 (stating a threshold formula). The applicant first notes that the mathematical term data(i,j) is the intensity of the source pixel *unmodified*

by any accumulated error, which in turn is denoted by data c(i,j) at col. 9 line 40. Furthermore, though the cited reference indicates that constant K may be optimized for extreme source pixel intensities 1, 2, 253, and 254, the constant K is in no way a function of an accumulated error. Thus, the cited reference does not disclose the step of "selecting a first intensity threshold if a said accumulated error . . . exceeds a first error threshold."

Moreover, even if Kakutani's intensity threshold were a function of the combined source pixel intensity and an accumulated error for the pixel, the reference would still not disclose selecting an intensity threshold if an error threshold were exceeded. The term threshold requires a discrete limit beyond which the intensity threshold is selected and prior to which it is not. Kakutani's intensity is continuous, i.e. it does not use a threshold. Finally, were Kakutani's intensity threshold a function of the combined source pixel intensity and an accumulated error for the pixel, any particular intensity threshold would not be selected if an *error* threshold were surpassed by an accumulated error, as is easily demonstrated by noting that the same accumulated error will result in the selection of an intensity threshold if the source pixel intensity exceeds a certain value, but will not result in the selection of an intensity threshold if the source pixel intensity does not exceed a certain value.

Similarly, independent claims 5 and 12 include respective limitations "selecting a first intensity threshold if a selected one of said current said . . . error and a neighboring said accumulated pixel error is less than an error threshold." Independent claim 20 includes the limitation of "selecting one of a plurality of threshold intensities for said selected threshold unit in response to an accumulated error for at least one of said current pixel and a pixel neighboring said current pixel." These respective limitations patentably distinguish over Kakutani for the same reasons as independent claim 1. Accordingly, the Examiner's rejection of independent claims 1, 5, 12, and 20, as well as their respective dependent claims 2-4, 6-11, 13-19, 21, and 22 should be withdrawn.

In view of the foregoing amendments and remarks, the applicant respectfully requests reconsideration and allowance of claims 1-22.

Respectfully submitted,

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Dated: July 13, 2006 By_____

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on July 13, 2006.

Dated: July 13, 2006

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